REMARKS

The Examiner's argument presented in the Final Office Action is used in the Advisory Action dated August 25, 2010. The following remarks are responsive thereto. Claims 1 and 11 have been amended by adding some of the technical features of claims 3 and 13 respectively. The Applicant asserts that no new matter is added. Claims 1-20 remain pending.

Claim Rejections - 35 USC § 103

The Advisory Action rejected, under 35 U.S.C. 103(a), claims 1, 2 and 5-12 as being unpatentable over Watson (US Pub 2003/0227903) in view of Akman (US Pat 7146410), and claims 3-4 and 13-20 as being unpatentable over Watson in view of Akman and further in view of Beser (US Pat 6523068). Based on the amendments presented above, the Applicant respectfully submits that claims 1-20 of the present application conform to the provisions of 35 U.S.C. 103(a).

Claim 1:

Amended claim 1 of the present application defines:

"A system for implementing multimedia calls across a private network boundary, comprising a public network and at least one private network, characterized in that the system comprises:

at least one media gateway for connecting with multimedia terminals of various protocols;

at least one boundary gateway for connecting the private network and the public network, and performing the translation of a private network address and a public network address, wherein each boundary gateway is provided with a unique subnetwork ID to correspond to the private network connected therewith; and the boundary gateway is used for receiving the signaling message from a media gateway connected therewith, establishing a signaling tunnel from the boundary gateway to the call controller according to its own subnetwork ID, and sending the signaling message to the call controller through the signaling tunnel;

a call controller for establishing calls and controlling service logics, in which is recorded the correspondence relationship information of all said boundary gateways and the subnetwork IDs;

wherein the call controller processes the call concerning a private network according to the subnetwork ID information."

The Applicant respectfully submits that the technical scheme of claim 1 is completely different from that of Watson, and claim 1 includes at least the following distinguishing technical features from Watson:

1) "each boundary gateway is provided with a unique subnetwork ID to correspond to the private network connected therewith"

With reference to Watson, it can be seen that Watson does not disclose any feature for uniquely identifying a subnetwork in a domain of a call controller; in other words, Watson does not disclose any feature equivalent to the "subnetwork ID" of the present invention. In particular, the dedicated port assignment in Watson is for assigning one or more dedicated ports for ***a station*** behind a firewall, and the dedicated port is assigned based upon the index value or the least significant byte value of ***a station*** ([0044], [0061]-[0063] of Watson). Thus if multiple stations in a network register at the PPG, multiple different dedicated ports will be assigned to these stations as the index values and the least significant byte values of these stations are different (reflected in [0046] of Watson), and as a result, the network will correspond to multiple different dedicated ports. So it can be seen that the network cannot be uniquely identified by those different dedicated ports; in other words, the dedicated port of a station in a network cannot be used to uniquely identify the network.

Watson also fails to disclose the correspondence relationship between the boundary gateway and the unique subnetwork ID. In particular, Watson discloses NAT firewalls are integrated with one or more of routers, and the NAT firewalls enable a private network with a multitude of private IP addresses to share one public IP address of router ([0033] of Watson). Note that the IP addresses herein are also used for stations in the private network (reflected in [0035]-[0036] of Watson), and thus cannot be used to identify the private network. In Watson, the router does not correspond to any unique identification of a network connected therewith.

2) "the boundary gateway is used for receiving the signaling message from a media gateway connected therewith, establishing a signaling tunnel from the boundary gateway to the call controller according to its own subnetwork ID, and sending the signaling message to the call controller through the signaling tunnel"

It can be seen from the above cited feature of claim 1 that when the boundary gateway receives the signaling message from a media gateway connected therewith, it establishes a **signaling tunnel** from the boundary gateway to the call controller **according to its own subnetwork ID**, and sends the signaling message to the call controller through the signaling tunnel. According to the specification of the present application, "In this way, the call controller 200 can receives signaling messages from different private networks through tunnels, and the original content of the signaling message sent by a media gateway is not modified. During this process, the boundary gateway is not concerned with which protocol (e.g., H.248, MGCP, SIP, etc.) the media gateway is using to send the signaling message to the call controller 200." Thereby, the present invention acquires many technical advantages over the prior art (such as the advantages No. 2-4 described on pages 35-36 of the specification).

In contrast, Watson does not disclose any feature relating to establishment of a signaling tunnel. Watson mainly relates to the VOIP communication between stations in different networks, and accordingly, Watson only teaches the setup of a VOIP connection between stations. Wherein, the router in combination with the NAT firewall in Watson only perform NAT of the private IP address and public IP address of the station, but they are not able to establish a signaling tunnel to a call controller. As a result, if the router and the NAT firewall in Watson were to be used for transmitting a signaling message from a media gateway if there were a media gateway, problems would occur because "In the message exchanges between devices such as media gateways or IP telephones etc. and their call controllers (e.g., a Softswitch, a GateKeeper in H.323, etc.), various signaling protocols, such as H.248, MGCP, SIP, H.323, etc., are widely used, which carry the address information of the media traffic of the calling and called sides in the capability negotiation. Whereas the NAT protocol can only translate an address in an IP packet header, and does not intervene in the content of the protocol payload in the IP packet, therefore these addresses of the media traffic (which are still private network addresses) cannot be translated; consequently, the media traffic will not be conveyed and thus fail. This is the most essential weakness of using the NAT scheme" (the second paragraph on page 3 of the specification). Thus it can be seen that the scheme disclosed in Watson is completely different from that of claim 1.

3) in a "a call controller" "is recorded the correspondence relationship information of all said boundary gateways and the subnetwork IDs; wherein the call controller processes the call concerning a private network according to the subnetwork ID information"

As stated above, the correspondence relationship between the boundary gateway and the subnetwork ID is not disclosed in Watson. Accordingly, Watson fails to disclose recording of such correspondence relationship information in a call controller. In Watson, the PPG only stores the public IP address, the private IP address, the MAC address and the telephone number of a station ([0038], [0043] and [0073] of Watson), and the PPG does not store any correspondence relationship between the router (regarded as the boundary gateway by the Examiner) and its connected network.

Besides, the PPG in Watson does not store the "subnetwork ID" either, since the concept of "subnetwork ID" is not involved in Watson, as analyzed above. Thus the PPG in Watson cannot process "the call concerning a private network **according to the subnetwork ID information**" as defined in claim 1 of the present application.

Those distinguishing technical features of claim 1 are not disclosed or taught by Akman or Beser.

Akman discloses systems and methods for ensuring that control protocols can be used between media gateways and media gateway controllers that reside on separate IP networks (Abstract of Akman). Akman also discloses using Network Address Translation (NAT) to translate IP addresses embedded with control protocol messages (column 1, lines 45-63 of Akman). However, Akman neither discloses any feature relating to the boundary gateway, nor discloses any feature relating to the uniquely assigned subnetwork ID; thus Akman fails to disclose or teach the above distinguishing technical features of claim 1.

Beser discloses "Methods for processing a media flow at an end of a tunneling association in data network. One method includes receiving a data packet on a public network, such as the Internet, and recognizing that it encapsulates another data packet for a virtual connection to an application. The virtual connection is addressed by private network addresses. Another method includes constructing a data packet for a virtual connection to the application and encapsulating it for transmission on the public network" (Abstract of Beser). It can be seen that the tunneling association in Beser is used for *data packet* transmission. Beser does not

disclose any feature relating to establishment of a **signaling tunnel**. Besides, Beser does not disclose any feature relating to the boundary gateway or the uniquely assigned subnetwork ID. Therefore, Beser fails to disclose or teach the above distinguishing technical features of claim 1.

Based on the above analysis, the Applicant respectfully submits that the above distinguishing technical features of claim 1 are not disclosed or taught by any of Watson, Akman and Beser or a combination thereof. And those distinguishing technical features are not common general knowledge in the art. With the distinguishing technical features, the present invention solves the drawbacks in current VoIP methods and shortcomings of the present NAT scheme (please see the "Background of the invention" part of the specification), and achieves many advantageous technical effects (please see page 35, line 23 to page 37, line 4 of the specification). Therefore, the Applicant respectfully submits that the subject matter of claim 1 was not obvious at the time the invention was made to a person having ordinary skill in the art, and thus claim 1 conforms to the provisions of 35 U.S.C. 103(a).

Claims 2-10:

Claims 2-10 depend on claim 1; as stated above, independent claim 1 conforms to the provisions of 35 U.S.C. 103 (a), thus dependent claims 2-10 are also in conformity with the provisions of 35 U.S.C. 103(a).

Claim 11:

Claim 11 defines a method corresponding to the system defined in claim 1, and claim 11 has been amended in a similar way as the amendment of claim 1. For at least reasons similar to those stated above for claim 1, the Applicant respectfully submits that independent claim 11 also conforms to the provisions of 35 U.S.C. 103(a).

Claims 12-20:

Claims 12-20 depend on claim 11; as independent claim 11 conforms to the provisions of 35 U.S.C. 103 (a), dependent claims 12-20 are also in conformity with the provisions of 35 U.S.C. 103(a).

CONCLUSION

In light of the above, the Applicant(s) submit(s) that the application is in condition for allowance and respectfully request that a Notice of Allowance be issued in this case. The Applicant(s) also request(s) that the Office telephone the attorneys of record in the event a telephone discussion would be helpful in advancing the prosecution of the present application.

Respectfully submitted,

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